

true *Ph. murex* of German New Guinea, but is distinguished by its shorter muzzle and larger teeth.

The Expedition also obtained a second example of *Phascogale melanura modesta*, Thos., previously only known from the type.

XXIV.—Some new Species of *Uromys*.

By OLDFIELD THOMAS.

(Published by permission of the Trustees of the British Museum.)

BESIDES the two species of *Uromys* above described from the Utakwa River, Dutch New Guinea, there appears to be evidence of at least four species belonging to the group of the large Papuan *Uromys* which have the terminal half of the tail yellow.

The first of these is *U. barbatus* (*Mus barbatus*, M.-Edw.), from the Aroa basin, S.E. New Guinea, of which the typical skull has been kindly lent me by Prof. Trouessart. In this the skull is narrow, with but little-expanded zygomata, low in the facial portion, with a strongly marked parietal convexity, from which the profile runs forwards in a straight line to the tip of the nasals. The palatal foramina are unusually wide apart and divergent behind, instead of being narrow and parallel. The pterygoid plates seem to be little developed and to begin further backwards, but the skull is in a somewhat unsatisfactory condition, and it is impossible to be sure of its natural characters. The hind foot of the type is 59 mm. in length.

Secondly, there is *U. validus*, Peters and Doria, to which I refer two specimens from Owgarra, Angabunga R. (*Meek*), and one from Madeu (*Stalker*), British New Guinea. The type was from Katau (*d'Albertis*).

In this species the skull is of normal shape, the upper profile evenly and slightly convex throughout, with but little parietal convexity or frontal flattening. The supraorbital edges are sharply square, with a slight concavity between them. Zygomata well expanded. Palatal foramina narrow, parallel. Mesopterygoid fossa rather narrow. Hind foot 52-56 mm.

A third described species is Ramsay's "*Hapalotis papuanus*," but the type having disappeared, several of the skull- and tooth-measurements being inconsistent with each other,

as though misprinted, and there being no certain locality, I think it best to treat the species as indeterminable.

In addition the Museum contains examples of the two following new forms:—

Uromys ductor, sp. n.

Like *U. validus*, but with larger skull. Colour more fulvous.

General colour above approaching "cinnamon," quite uniform in the two available skins. Hands whitish. Feet pale brown.

Skull in all essential characters as in *U. validus*, but size larger. Supraorbital ridges rather more strongly developed. Mesopterygoid fossa broader.

Dimensions of the type (measured on skin):—

Head and body 325 mm.; tail 280; hind foot 55; ear 26.

Skull: greatest length 65; condylo-incisive length 61.5; zygomatic breadth 32; nasals 24.2×7.4 ; interorbital breadth 9.4; breadth of brain-case 21.5; palatilar length 32.6; palatal foramina 7.3; breadth of mesopterygoid fossa 5.2; upper molar series 11.2.

Hab. Avera, Aroa River, British New Guinea. Another specimen from Dinawa, Owen Stanley Range (*A. E. Pratt*).

Type. Adult male. B.M. no. 3. 12. 1. 4. Collected by A. S. Meek. Three adult specimens examined.

This species is no doubt closely allied to what I consider as *U. validus*, but is distinguished by its larger skull and more fulvous colour.

Uromys prolixus, sp. n.

Like *U. validus* and *ductor*, but with long feet and long narrow skull.

Size greater than in *U. ductor*, the hind foot 64 mm. in length. General colour about as in *U. validus*, apparently not so fulvous as in *ductor*, but as the specimen is in spirit not much dependence can be placed on the exact shade of colour. Hands white; feet white, with a wash of greyish brown on the metatarsals. Tail with terminal half yellow.

Skull long and slender, much longer than in *ductor*, but the zygomata not more widely expanded. Upper profile slightly convex in the parietal region, then concave between the orbits, strongly convex above the base of the zygomata, the nasals sloping downwards from the frontal convexity. The frontal region is also convex in the other direction, high mesially, sloping laterally. Supraorbital edges with

well-marked ridges and slight postorbital projections. Palatal foramina narrow, parallel. Mesopterygoid fossa fairly wide.

Dimensions of the type (measured on the spirit-specimen):—

Head and body 265 mm.; tail 272; hind foot 61; ear 25.

Skull: greatest length 66.6; condylo-incisive length 62; zygomatic breadth 32.2; nasals 24.2×8.2 ; interorbital breadth 10; mastoid breadth 21; palatilar length 33.5; palatal foramina 7.3×3.3 ; width of mesopterygoid fossa 5; upper molar series 12.2.

Hab. Haveri, $9^{\circ} 25' S.$, $147^{\circ} 35' E.$ British New Guinea. Alt. 700 m.

Type. Adult male in spirit. B.M. no. 97. 8. 7. 67. Collected by Dr. L. Loria, and presented by the Museo Civico, Genoa.

This species is distinguished by its long foot and long slender skull, with convex frontal region and long molar series.

Of the smaller forms of *Uromys* there seem to be a considerable number of species, all closely allied and distinguishable merely by size and slight differences in colour. The following appear to be undescribed:—

Uromys arcium, sp. n.

Size comparatively large, the skull larger than in any of the other small species. General colour above dull rufous brown (specimen skinned from spirit); below whiter throughout, not very sharply defined laterally, the hairs white to their roots. Hands and feet whitish, the metapodials browner. Tail unusually short, shorter than the head and body, practically naked, the few scattered hairs less than a scale in length; with about fourteen rings of scales to the centimetre*; blackish above, inconspicuously lighter below.

Skull strongly built, heavier than in the few species of the *U. levipes-moncktoni* group which equal it in length. Interorbital edges with fairly well-marked beads, which are less divergent posteriorly than in *U. levipes* and its allies.

Dimensions of the type (measured on the spirit-specimen):—

Head and body 138 mm.; tail 127; hind foot 28; ear 18.

Skull: greatest length 40; condylo-incisive length 38.1; zygomatic breadth 21; nasals 13.6; interorbital breadth 6.8; mastoid breadth 14.7; palatilar length 18.1; palatal foramina 6.2; upper molar series 7.1.

* Caudal scale-rings are always counted about the middle of the tail; they become more numerous towards the tip.

Hab. Rossel I., d'Entrecasteaux Group.

Type. Adult female. B.M. no. 89. 6. 3. 2. Collected 18th October, 1888, and presented by Basil Thomson, Esq.

Distinguished by its size, white belly, and comparatively short tail.

Uromys melicus, sp. n.

A medium-sized species with brownish under surface.

Size, as gauged by skull, markedly less than in *U. cervinipes*. General colour above varying from broccoli-brown to cinnamon; under surface soiled greyish for its greater extent, the hairs slaty basally and more or less buffy terminally. But the chin, throat, and axillary region are nearly always white, and there is also a white patch across the groin, so that in a series of specimens laid side by side there is a transverse band of white anteriorly, then a broad belt of soiled buffy greyish, succeeded by a second white band posteriorly. Hands and feet dull whitish. Tail wholly dark, with about eleven rings to the centimetre, the fine sparse hairs about a scale in length and rather more numerous than usual.

Skull smaller in all dimensions than in *U. cervinipes*; the supraorbital edges sharp and slightly beaded, more divergent posteriorly than in *U. cervinipes*.

Dimensions of the type (measured in flesh):—

Head and body 122 mm.; tail 149; hind foot 29; ear 19.

Skull: greatest length 32·7; condylo-incisive length 30·5; zygomatic breadth 17·3; nasals 11·1; interorbital breadth 4·9; mastoid breadth 13·5; palatilar length 14·2; palatal foramina 5·3; upper molar series 5·8.

Hab. Melville Island, Northern Territory of Australia. Type from Biro, Apsley Straits. Sea-level.

Type. Adult female. B.M. no. 13. 6. 28. 32. Original number 23. Collected 22nd January, 1912, by Mr. J. P. Rogers. Thirteen specimens examined.

“Trapped in the mangroves.” “Trapped round tent.” “Very common.”—*J. P. R.*

Distinguished by its soiled buffy-greyish belly and whitish pectoral and inguinal patches.

A very similar *Uromys* occurs in some of the islets off the Cape York coast, but our material is not sufficient to say if it is or is not specifically identical with the Melville Island species.

U. cervinipes, Gould, of S. Queensland, and the doubtfully

distinct *U. banfieldi*, de Vis, of Dunk Island, N. Queensland, have the skull markedly longer than in *U. melicus*.

Uromys lutillus, sp. n.

A small species with buffy-greyish under surface.

Size much smaller than in any of the described species. General colour above dark clay-colour or dull fulvous. Under surface similar but paler, the hairs slaty at base, buffy terminally; throat, axillary region, and centre of belly with some ill-defined whitish patches, a large white patch covering the inguinal region. Hands and feet whitish. Tail uniformly brown; hairs very few; scale-rings about fifteen to the centimetre.

Skull with square unbeaded supraorbital edges. Palatal foramina unusually long, reaching back to the level of the front of m^1 .

Dimensions of the type (measured in skin):—

Head and body (c.) 112 mm.; tail 115; hind foot 24.

Skull: greatest length (c.) 29; condylo-incisive length (c.) 27; tip of nasals to lambda 25.7; zygomatic breadth 15.2; nasals 10.3; interorbital breadth 4.3; palatilar length 12.7; palatal foramina 5.1; upper molar series 5.3.

Hab. Owgarrá, Angabunga R., S.E. British New Guinea.

Type. Adult male. B.M. no. 5. 11. 28. 20. Original number 20. Collected 3rd November, 1904, by A. S. Meek. Two specimens.

This *Uromys* is distinguished from all previously described species by its small size, and from the two next following by its long palatal foramina, comparatively large teeth, and buffy-grey underside.

Uromys murinus, sp. n.

A small insular species with white belly.

Size quite small, about as in *U. lutillus*. General colour above strong fulvous, but both the specimens have been skinned out of alcohol and are probably discoloured. Under surface white, the white narrowed on the belly. Hands and feet white. Tail of normal proportions, brown above, slightly paler below, its hairs few and short; scale-rings fourteen to the centimetre.

Skull with the supraorbital edges sharply square, not ridged. Palatal foramina of medium length, not quite reaching to the level of the front angle of m^1 . Molars as long as, but rather narrower than, in *U. lutillus*, decidedly larger than in the next species.

Dimensions of the type (measured on the spirit-specimen) :—

Head and body 97 mm.; tail 109; hind foot 24; ear 16.
Skull: greatest length 30; condylo-incisive length 27; zygomatic breadth 15; nasals 10; interorbital breadth 4·7; palatilar length 12·7; palatal foramina 4·9; upper molar series 5·2.

Hab. Murray Islands, Torres Straits. Type from Mer.

Type. Adult female. B.M. no. 99. 9. 10. 3. Collected and presented by Prof. A. C. Haddon. Another specimen collected by the Rev. S. MacFarlane.

Uromys muscalis, sp. n.

A small species with white belly and very small teeth.

External characters as in *U. murinus*, though the colour is rather less strongly fulvous. The specimens of both have been skinned out of alcohol, but it is not possible to say if they have been equally affected by it. Under surface and inner side of limbs wholly white. Tail brown above, lighter below; scale-rings about fifteen to the centimetre.

Skull smaller and more delicately built than in *murinus*; supraorbital edges sharply defined in the type, which is aged. Palatal foramina quite short, ending nearly half their length in front of the molars. Teeth very small, conspicuously smaller than in any other species.

Dimensions of the type (measured on the spirit-specimen) :—

Head and body 95 mm.; tail 105; hind foot 22; ear 14.
Skull: greatest length 29; condylo-incisive length 26·6; zygomatic breadth 14·5; nasals 10·2; interorbital breadth 4·1; mastoid breadth 11; palatilar length 12·4; palatal foramina 4; upper molar series 4·7.

Hab. Lower Fly River, British New Guinea.

Type. Old male. B.M. no. 86. 5. 16. 4. Collected by the Rev. S. MacFarlane. Three specimens.

Distinguishable by its small size and extremely small teeth.

XXV.—*Further Notes on the Skull, Brain, and Organs of Special Sense of Diademodon.* By D. M. S. WATSON, M.Sc., Lecturer in Vertebrate Palaeontology in University College, London.

WHILST collecting on the farm Winnaarsbaaken, District Albert, Cape Colony, which I visited with the aid of a grant from the Percy Sladen Trustees, I obtained the back of a